Solvent Abuse Prevention Workshop Manual

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Nechako Fraser Junction Metis Association

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Forward

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***Nechako Fraser Junction Metis Association* is pleased to present a *Solvent Abuse Prevention Program* for the second consecutive year. This program targets Aboriginal off-reserve school-aged children. We have created a manual to enable anyone to deliver Solvent Abuse Workshops to children, teens and the general public. This will provide more awareness to the community about the dangers of solvent abuse.**

Background

***Nechako Fraser Junction Metis Association* (*NFJMA*) was incorporated as a non-profit society on July 21st, 1992. *NFJMA* operates with a dedicated group of volunteer Metis people. Since incorporation, much has been done to address the needs of Metis children and their families in Prince George.**

Purposes

To advance at all possible occasions the interests of the Metis people for the purpose of promoting their common interests through collective action.

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Section 1

Solvent Abuse

1.1 SOLVENT ABUSE

1.2 WHY ABUSE SOLVENTS?

1.3 SOLVENTS

1.4 EFFECTS

- **A) ON THE INDIVIDUAL**
- **B) ON THE COMMUNITY**

1.5 HOW TO DETECT SOLVENT ABUSE

1.6 WHAT IS PREVENTION?

1.7 FACTS ON SOLVENT ABUSE

1.1 Solvent Abuse

Solvent abuse occurs when an individual directly inhales household or commercial products to produce a 'high'. These products are very accessible, and can be obtained by anyone at any age. Solvents are legal, thus making solvent abuse difficult to target and control. Individuals find solvent abuse easy to mask because of its legitimate uses. These products containing mind-altering substances can damage lives forever.

Inhalant abuse, on an experimental basis, is not restricted to social or geographic boundaries. Chronic inhalant abuse, however, is overrepresented among the poor and those youths suffering emotional challenges in their lives and seeking some form of escape. Studies of young inhalant abusers show high rates of delinquency, poor school performance, and emotional difficulties. They often come from disorganized, multiproblem homes in which the parents are actually or effectively absent or else engage themselves in abuse of alcohol or some other substance (Hofmann, 1983, p. 136-137).

Whatever the ethnic identity of the chronic inhalant abuser, however, a critical factor is peer influence. Most studies indicate that glue, solvent, or aerosol inhalation is generally experienced in small groups, often at the urging of friends or relatives. Young inhalant abusers tend to be more alienated than others at this age, and the feelings of alienation can be an important factor leading a youth to others who are also alienated, thus creating clusters of peers who engage in this form of drug-taking behavior (Oetting, Edwards, and Beauvais, 1988, p. 172-203).

Solvents - Are substances in which materials may be dissolved. i.e. water

Solvent abuse - Is the deliberate inhalation of solvents and aerosols in order to produce mind-altering effects.

Chronic inhalant abuse - This abuse occurs when the individual abuses solvents on an on going basis.

1.2 Why Abuse Solvents?

Solvents are predominantly abused by children due to their inability to access other mind-altering substances such as cocaine or heroin and other such drugs. These drugs usually require a contact that children do not have. Solvents are cheap, legally accessible, and provide a quick way to escape reality.

Why choose solvents over other drugs?

- solvents are in small packaging making them easy to steal
- solvents are easily concealable, can be carried in a child's backpack
- they are legal
- they are available at a low cost
- children are often never questioned for having solvents in their possession because of their legitimate uses

What are common reasons for abuse?

- absence of spirituality
- abuse or neglect
- alienation
- boredom
- children have low tolerance for stress and anxiety
- curiosity
- exposure to sexual, physical and mental abuse
- family problems
- improper moral upbringing
- isolation
- lack of alternative ways to get high on life
- peer pressure
- sibling influence
- a way to alleviate boredom

1.3 Solvents

A solvent is a substance in which materials may be dissolved. Most inhalants are part of a group of chemicals called, volatile organic solvents. Volatility is a measure of the solvent's ability to vaporize. An example of a solvent would be water. However, water does not have the ability to induce mind alterations. Solvents may be in pure form or found in products with only small concentrations.

Common household products that are abused:

- aerosol hair spray
- cigarettes or charcoal fluid
- disinfectants
- fingernail polish and polish remover
- freon
- gasoline
- hobby glues and cements
- lacquers and enamels
- permanent felt marker ink
- spray deodorants
- spray paint
- upholstery protection
- varnishes and varnish removers
- vegetable frying pan lubricants
- windshield de-icers
- whipped cream propellants
- white out

These are just a few products, as there are many new products being introduced everyday.

1.4 Effects

Inhalants are depressants, which slow the brain and the nervous system. Like alcohol, inhalants produce giddiness or euphoria, reduce inhibitions, and induce delusions of well-being and grandeur. When used frequently or in volume, inhalants numb senses, cause hallucinations, or result in unconsciousness (Schlitt, & eds., 1991, p. 47).

The dangers of inhalant abuse lie not only in the toxic effects of the inhaled compound on body organs but in the behavioral effects of the intoxication itself. Inhalant-produced feelings of euphoria also include feelings of recklessness and omnipotence. There have been instances of young inhalant abusers leaping off roof tops in an effort to fly, running into traffic, lying on railroad tracks, or incurring severe lacerations when pushing their hand through a glass window that has been perceived as open. The hallucinations that are sometimes experienced carry their own personal risks. Walls may appear to be closing in or the sky may appear to be falling. Ordinary objects may be perceived to be changing their size, shape or color. Any one of these experiences can easily lead to impulsive and potentially destructive behavior (Hofmann, 1983, p. 138-139).

There are also hazards in the ways in which inhalants are administered. While solvents are sometimes inhaled from a handkerchief or from the container in which they were originally acquired ("huffing"), glues and similar vaporous compounds are often squeezed into a plastic bag and inhaled while the bag is held tightly over the nose and mouth ("bagging"). Potentially, a loss of consciousness can result in hypoxia and asphyxiation. Choking can occur if there is vomiting while the inhaler is unconscious (Brecher, 1972, p. 331).

Chronic exposure to Benzene can cause leukemia and severe anemia. Glue and contact cement contain Hexane, which can damage the nervous system and cause numbness, loss of touch sensation in the feet, and limb weakness. Ketones in rubber cements, printing ink, and paint can cause similar nerve damage. Methylene chloride, used as a solvent in spray paints and thinners, is converted to carbon monoxide in the

body. Freon aerosol propellants in such products as frying pan spray (PAM) have caused Sudden Sniffing Death by cardiac arrhythmia from most consumer aerosol products (Comstrock & Comstrock, 1977, p. 47). Cardiac arrhythmia is an irregular heart beat that can result in heart failure if the sniffer is frightened or exerts themselves in physical exercise.

central nervous system - The nervous system that consists of the brain and spinal chord.

central nervous system depressant - Something that slows down the functioning of the central nervous system.

euphoria -A general feeling of well-being.

hallucinations - A distortion of sensory perceptions.

omnipotence - A feeling of being all-powerful and indestructible.

A) Effects On The Individual

The individual who may only be experimenting with solvents puts themselves at risk for a number of dangers, and lifelong serious physical and psychological side effects.

Some effects include:

- loss of sense of self
- severe depression
- laziness will hinder their ability to participate in healthy activities
- lose ambitions
- school academics will go down
- crime, vandalism may interfere with their future

B) Effects On The Community

The effects of solvent abuse hurt everyone in the community not only the abuser.

- ⇑ mental breakdown
- ⇑ accidents
- ⇑ vandalism
- ⇑ crime
- ⇑ suicide
- ⇑ death

1.5 How To Detect Solvent Abuse ?

Acute solvent abuse, refers to the time directly after inhalation. Signs of solvent use occur immediately as it takes only five to eight seconds for the product to travel from the lungs to the brain. These signs include: unsteady walking, reddened eyes, slowed reflexes, coughing, sneezing, giddiness and slurred speech. The individual closely resembles a severely alcohol induced individual.

Chronic abuse happens when someone uses solvents over a certain period of time. Some noticeable physical damages include sores around the mouth and nose, as well as, significant weight loss. The individual will appear to have more cold's and flu's due to a break down in their immune system. Abusers will alienate themselves from others, as well as, appear moody. They will lose ambition and subsequent hobbies or obligations may be neglected.

1.6 What Is Prevention?

Prevention can be defined as, an action taken to delay or inhibit the onset of drug use. Prevention programs should be implemented before children begin to misuse solvents and actual damage has occurred. Many people like to believe that their children will not be exposed or introduced to drug taking behavior, however, many children are. It is impossible for us as a parent, caregiver or educator to shelter children from the elements of drugs. Imminently, children will be exposed to drug usage through the media, peers and sometimes even parents. Therefore, we are responsible to prepare and educate children of the harmful effects of mind-altering substances because education is prevention!

A common statement is:

"My child does not speak of doing drugs, therefore I do not need to talk to him/her about it."

Firstly, many children are afraid to talk about drugs with anyone other than their peers because they feel adults may suspect them of abusing drugs. Also, many children are unaware of the effects of drugs. Knowledge of the effects may be enough of a disincentive to prevent children from beginning to use drugs. Many children are unaware that an abuser can actually die from abusing solvents. Solvents appear to be a harmless product that may be found under the kitchen or bathroom sink. However, this household product has the capacity of ruining the lives of children forever.

Prevention must begin at an early age. Educating children of the short and long term adverse solvent abuse effects will potentially discourage children from misusing these products. In addition to providing children with the effects of solvents, they should be introduced to peer refusal skills and activities to increase self-esteem. It is also important for children to accept and respect cultural differences.

Do not forget!

Primary Prevention has the highest apparent likelihood of success. The longer a person delays initiating drug use, the less likely he or she is to become a chronic abuser. (Brill & Christie, 1974; Davidson, Mellinger, & Manheimer, 1977; Kandel, 1978a).

1.7 Facts On Solvent Abuse

Recent statistics:

Nationwide, nearly one in five eighth-graders (19.9) has sniffed or huffed toxic product such as spray paint or gasoline.

Among seventh-graders, inhalants are used 150% more often than marijuana.

A 1994 study conducted by the University of Michigan reveals that inhalants are the third most abused substance (after alcohol and tobacco) among elementary and middle school students.

Among high school students, inhalants are the fourth most abused substance, after alcohol, tobacco, and marijuana.

Inhalants outrank marijuana as the "drug of choice" among twelve to fourteen year-olds.

According to a 1994 survey conducted by the National Institute of Drug Abuse, approximately 12,000 infants were exposed in utero to inhalants.

Johnston, L.D., O'Malley & Bachman. (1989). Drug Use, Drinking and Smoking: National Survey Results from High School, College, and Young Adult Populations, 1975-1988. Rockville, MD: National Institute on Drug Abuse.

Section 2

Workshops

2.1 WORKSHOP INFORMATION

2.1 Workshop Information

Workshops should differ depending on the audience's age, knowledge base and skill level. The content of these workshops should be applicable to each audience.

The materials in Solvent Abuse Workshops should include information defining solvent abuse and its effects. However, it is equally important to create material that may help build self-esteem and enhance social skills. Knowledge of the dangerous effects of solvent abuse may not be enough to discourage children from abusing solvents. They must also obtain enough self-esteem and social skills to reject this inappropriate behavior.

Teachers and parents need to become aware of the devastating effects of solvents, as well as how to detect it. Very often, teachers and parents are often uninformed of where to go for help and what measures can be taken to prevent abuse.

☛ visual aids are very important in these workshops

Section 3

Children's Workshops

3.1 INTRODUCTION
- A) DEVELOPMENT
- B) KNOWLEDGE OF ABUSE
- C) KEY ELEMENTS

3.2 WORKSHOP FOR KINDERGARTEN TO GRADE THREE
- A) OUTLINE
- B) WORKSHOP

3.3 WORKSHOP FOR GRADE FOUR TO SEVEN
- A) OUTLINE
- B) WORKSHOP

3.1 Introduction

A) Development

Children encompass a wide range of physical and mental development. They drastically change emotionally, physically and socially from one year to the next. Generally, children learn by following others' behaviors and actions, specifically their siblings, friends and even parents. They have difficulty thinking in terms of possibilities and consequences so they may not understand that solvents can harm them. Role models play key factors to set guidelines for values and behaviors.

B) Knowledge Of Abuse

Children will generally have some knowledge of solvent abuse. Curiosity is usually the driving force that leads children to experimenting with solvents. They may try to sniff or drink solvent materials because they think the product smells good. In fact, many children who do experiment are unaware that they can receive mind-altering effects. They may have discovered it by watching an older friend or sibling sniff. They are rarely aware of the adverse effects that are related to solvent abuse. Children need to be educated on the consequences of ingesting unknown substances such as: solvents and medicine.

As a child, did you, or someone you know ingest something that you were not supposed to?

Many people did!

C) Key Elements

Cultural awareness is recognized to build children's self-esteem. It is known that Aboriginal children are presented with extra challenges of racial discrimination, and loss of cultural identity. Therefore, it is important to use cultural activities to demonstrate Aboriginal lifestyles

and traditions. Encouraging young people to accept and value cultural differences will definitely improve self-esteem and help children get along with others. These activities may include videos, crafts, guest speakers and eating.

Examples of activities
Videos - "Spirit of Forest"
Crafts - Dream catcher, beaded necklaces, pouches
Guest speakers - Metis or other Aboriginal elders, role models
Eating - Traditional food such as, bannock

3.2 Workshop For Kindergarten To Grade 3

A) Outline

1. Introduction
2. Does anyone know what solvent abuse is?
3. Why do people sniff?
4. The effects of solvents
5. How can you prevent yourself from sniffing?
6. How can you prevent your friends from sniffing?
7. Where can you go for help?

B) Workshop

1. INTRODUCTION

Introduce yourself and your reason for being there.

2. DOES ANYONE KNOW WHAT SOLVENT ABUSE IS?

Verbally ask the students if they have ever heard about solvent abuse. Many children do not understand the term solvent, therefore you must explain what it is without going into much detail.

Solvent abuse is when someone breathes in bad chemicals. This causes you to feel different.

- **Tell them it is important to stay away from products found underneath the sink in the kitchen, bathroom, or in the garage. Also before using unknown products get permission from parents. These products can be harmful!**

3. WHY DO PEOPLE SNIFF?

Verbally ask participants why they think children sniff. If they only come up with a couple answers you can provide the rest.

- sadness
- see others doing it
- boredom
- curiosity
- unaware of what solvents will do to you

- **sadness and depression** - some children often feel upset about something and feel they have no one to talk to
- **see others doing it** - some children learn by watching others, seeing an older sibling such as a brother/sister may cause you to sniff
- **boredom** - some children can not think of constructive and healthy things to do
- **curiosity** - some children are curious to see what inhaling solvents will do to them
- **unaware of what solvents will do to you**- many children are unaware of how potentially harmful these products are for people to ingest or breathe in.

4. THE EFFECTS OF SOLVENTS

Inform the participants that solvents are very harmful and they should stay away from any unknown substances. Then verbally explain some of the effects. Children's vocabulary is limited so keep the explanation of the effects simple.

- dizzy, tired
- feel sick
- throw up
- pass out
- will act different
- feel upset after
-hurts your body

It is important to tell children that these products are flammable, explosive and poisonous!

5. HOW CAN YOU PREVENT YOURSELF FROM SNIFFING

Verbally ask the children how they can prevent themselves from sniffing. They will have some ideas, but you can add to their list.

- keep active and busy
- feel proud about your culture and yourself
- talk to people when you have a problem
- don't be afraid to say no!

- **keep active and busy** - it will help you stay healthy
- **feel proud about your culture and yourself** - find out more about your culture from parents or grandparents
- **talk to people if you have a problem** - you will feel a lot better afterwards
- **don't be afraid to say no!** - especially if you do not feel right about doing something

6. HOW CAN YOU PREVENT OTHERS FROM SNIFFING?

Verbally ask the children what they could do to prevent friends from sniffing. Also, you could ask what are ways they could be a good friend to others.

- be a good listener
- be a good role model
- treat others with respect
- remember everyone has feelings
- make others feel wanted

- **be a good listener** - always be there for your friends
- **be a good role model** - by setting good examples so others will follow you
- **treat others with respect** - treat everyone equally and how you would want to be treated
- **remember everyone has feelings** - things you say or do can have a big effect on the way people feel
- **make others feel wanted** - others may feel bad if you leave them out

7. WHERE CAN YOU GO FOR HELP?

Explain to children it is normal to have problems and they should talk to someone about it if they do. Ask them who they can talk to if they have a problem.

- ☺ Parents
- ☺ Friends
- ☺ Someone you trust
- ☺ Teachers
- ☺ School counselors
- ☺ First nations support workers
- ☺ Family doctor
- ☺ Health nurse
- ☺ Police

After the presentation is over. You may ask the children what new things they learned today about solvent abuse. This will help you get an idea of what they retained. It also reinforces the new knowledge they have learned. Rewarding children with things such as pencils or candy helps encourage the children to participate in answering this question.

The workshop will be fairly short unless you do an activity or watch a video. "Spirit of the Forest" is an excellent and recommended video for children. If you do choose to watch this video it should be implemented after explaining the effects and before talking about prevention.

Questions for to ask after watching "Spirit of the Forest"

What healthy activities were Raccoon, Rabbit and Squirrel doing? (fishing, chasing butterflies, finding pine cones)
Why did Raccoon and Rabbit leave Squirrel out? (she was a girl)
How do you think Squirrel felt about being left out? (sad, inadequate)
Why did Raccoon and Rabbit argue? (Rabbit wanted to be friends with Squirrel)
What unhealthy activity does Fox do? (sniff solvents)
What did Fox offer Raccoon? (gas) Did it help him feel better? (no, sick)
Is Fox a good friend to Raccoon? (no) Who are his real friends? (Rabbit and Squirrel)
Who has the power to say no? (everyone!)
What advice did Spirit of the Forest give at the end? (Act as a role model, help others who need help)

3.3 Workshop For Grade 4 to 7

A) Outline

1. **Introduction**
2. **Does anyone know what solvent abuse is?**
3. **Why do people sniff?**
4. **The effects of solvents**
5. **How can you help prevent yourself from sniffing?**
6. **How can you prevent a friend from sniffing?**
7. **Where could you go for help, if you or your friend sniffed?**

B) Workshop

1. INTRODUCTION

Verbally introduce yourself.

After introducing yourself have children participate in an activity to increase cultural awareness.

2. DOES ANYONE KNOW WHAT SOLVENT ABUSE IS?

Verbally ask the children if they have heard about solvent abuse. You may have to provide them with an example, such as when someone sniffs a product like gas. Many children do not understand the term solvent.

Solvent abuse is when someone sniffs bad chemicals into their lungs causing them to feel `high'.

3. WHY DO PEOPLE SNIFF?

You may ask the children why people may sniff. When they answer you can write the answer on the chalk board. This makes them feel as if their answer is validated.

- low self-esteem
- peer pressure
- curiosity
- boredom
- see others do it
- not feeling good culture and heritage

- **low self-esteem** - not feeling good about one's self causes feelings of low-self worth
- **peer pressure** - occurs when an individual feels pressured into conforming to others' expectations or behaviors
- **curiosity** - children are eager to learn about anything. They want to explore new ideas and take part in different activities
- **boredom** - children need to be intellectually and emotionally stimulated they often find it difficult to think of things to do
- **see others do it** - children learn by watching others interact and behave
- **not feeling good about culture and heritage** - children need a sense of positive identity so they can be proud of their background

4. THE EFFECTS OF SOLVENTS

Verbally inform children of the effects to expect from sniffing solvents. You may just tell them verbally and/or write the effects on the board to provide them with something concrete to look at.

Short term effects:

- dizzy
- passing out
- vomiting
- hallucinating
- bizarre behavior
- lose coordination

→Many people pass out and choke on their own vomit!!

Long term effects:

- will feel lazy and will miss out on fun activities
- will cause you to catch more colds - causes blood abnormalities causing the individual to be more susceptible to infectious diseases
- will kill brain cells - brain cells will be killed and will never grow back
- grades in school will go down
- may cause death - Many children die due to sudden death syndrome. After an individual sniffs solvents their heart will begin to beat irregularly. If the individual becomes startled, the heart begins to beat faster and will cause the heart to stop.

5. HOW CAN YOU PREVENT YOURSELF FROM SNIFFING?

Verbally ask the participants what ways they can prevent themselves from sniffing.

- **do fun healthy activities** - alleviating boredom in a healthy way will promote a healthy balanced lifestyle
- **find out more about your culture** - culture awareness will promote a positive identity.
- **feel proud about your culture**
- **don't be afraid to say no to others** - peer pressure may cause children to give in to other's behaviors and values due to real or imagined pressure

6. HOW CAN YOU PREVENT A FRIEND FROM SNIFFING?

Ask the participants about ways that they can prevent a friend from sniffing.

Ask them how they can prevent a friend from sniffing.

- be a good friend to others
- encourage friends to do well
- make friends feel accepted
- inform them of the effects

- **be a good friend to others** - always be there to listen to friends, and be sure to show them respect
- **encourage friends to do well** - this will help them strive for more goals
- **make friends feel accepted** - let them know you appreciate them
- **inform them** - many people are unaware of the dangers of solvent abuse

7. WHERE CAN YOU GO FOR HELP, IF YOU OR YOUR FRIEND SNIFFED?

Verbally ask the participants where they can go for help.

- ☺ Parents
- ☺ Friends
- ☺ Someone you trust
- ☺ Elders
- ☺ Medical help
- ☺ Family doctor
- ☺ Health nurse
- ☺ Emergency / hospital
- ☺ Law enforcement

Section 4

Teens

4.1 TEENS

- **A) DEVELOPMENT**
- **B) KNOWLEDGE OF ABUSE**
- **C) KEY ELEMENTS**

4.2 WORKSHOP FOR TEENS

- **A) OUTLINE**
- **B) WORKSHOP**

4.1 Teens Workshop

a) Development

Adolescence is the period during which young people move out of childhood and get ready to make up their adult lives. It is a period of profound change in every aspect of life: physical, psychological, and social (Bootzin et al.). This stage has often been termed the storm and stress period. Teens are trying to find themselves and fall very vulnerable to drugs.

Teens begin thinking abstractly and enjoy learning. They begin spending more time with their friends and begin making their own decisions. Therefore, decision making skills may help children better deal with their friends. A proper moral upbringing will directly influence the decisions they make.

They often have a shaky self image and may be easily persuaded by peers if they do not have strong values. They begin to think in terms of consequences and do acknowledge that their actions can result in personal harm. They become risk takers and have a tendency to believe that anything bad can not happen to 'them'.

b) Knowledge Of Abuse

Teens generally have knowledge of drug abuse either from media or peers. Teens look to the media for setting guidelines regarding what is 'in'. Unfortunately, media has a tendency to glamorize drug use. Teens want to appear older as they strive for independence. Many teens feel it can be achieved by participating in drug taking behavior.

> Adolescents are vulnerable to pro-drug appeals because they wish to appear mature. Furthermore, adolescents are much more concerned about present-day issues, friendships, and activities than about future health problems. Therefore, prevention programs need to counteract the belief that drug use shows maturity and to concentrate on short-term consequences of drug use. (Schilit & Gomberg, 1991).

c) Key Elements

Teens should receive accurate information about the short and long term effects of solvents. These effects could interfere with future undertakings and physical performance. Teens must acknowledge they do not have to give into peer pressure and they are entitled to making their own decisions.

4.2 Teens

A) Outline

1. Introduction
2. Does anyone know what solvent abuse is?
3. Why do people sniff?
4. Short term effects
5. Long term effects
6. How to detect solvent abuse
7. How can you prevent people from sniffing
8. Where could you go for help, if you or your friend sniffed?

B) Workshop

1. INTRODUCTION

Introduce yourself.

2. DOES ANYONE KNOW WHAT SOLVENT ABUSE IS?

Verbally ask if anyone knows what solvent abuse is.

Solvent abuse is when an individual inhales chemicals into their lungs in order to receive a high.

3. WHY DO PEOPLE SNIFF?

Verbally ask the participants why they believe people choose to sniff solvents. You may write the reasons on the board.

People sniff because:

- boredom
- curiosity
- low self-esteem
- not feeling good about culture and heritage
- peer pressure

- **boredom** - teens desire to escape boredom; however, they often lack ideas and ways of doing this
- **curiosity** - teens become curious about the effects of different drugs
- **low self esteem** - if teens do not fit in with their peers they will not feel good about themselves
- **not feeling good about culture and heritage** - being misinformed or uninformed about one's culture imposes inappropriate feelings
- **peer pressure** - pressure to conform to others beliefs or behaviors

4. SHORT TERM EFFECTS

It is difficult to predict the "high" received from sniffing solvents. The high depends on the mind set and health of the abuser or the amount of toxicity contained in the solvent product.

Directly after inhaling solvents individuals will feel:

You may write this on the chalk board

- invincible / all powerful
- euphoria
- hallucinations and delusions
- lose coordination
- sudden sniffing death
- pass out

- **invincible /all powerful** - the individual will feel they can do anything without getting hurt
- **euphoria** - the abuser will feel a sense of well-being, this may last only a short time
- **hallucinations and delusions** - objects may appear distorted or there when they are not
- **lose coordination** - will walk without any coordination and will appear to stagger. individual may appear severely intoxicated on alcohol
- **sudden sniffing death** - the heart beats irregularly after inhalation. If the abuser is startled or engages in strenuous physical exercise it may cause the heart to stop
- **pass out** - Solvents may cause the abuser to pass out. If the abuser vomits while passed out and lying on their back they risk the chance of dying from swallowing their own vomit.

5. LONG TERM EFFECTS

You may write the following on the chalkboard

Remember - These effects are irreversible and are present even if the individual is not high.

- brain damage
- depression
- fine movement degeneration
- susceptibility to infections
- weight loss
- short & long term memory damage
- damage to the heart, lungs, liver and kidney

- **brain damage** - creates irrecoverable damage to the brain
- **depression** - users usually become severely depressed because solvents are a central nervous system depressant, much like alcohol
- **fine movement degeneration** - things that involve intricate movement may become increasingly difficult
- **susceptibility to infections** - users are more prone to viral infections as their immune system is broken down
- **weight loss** - solvent abusers appetites decrease. many abusers suffer from being malnourished. the abuser also loses muscle mass
- **short & long term memory** - the short and long term memory may be disturbed
- **damage to the heart, lungs, liver and kidney** - many of the effects may not be noticeable for a number of years and may only be detected unless checked by a doctor

*****solvent abuse will interfere with your academic and sport goals*****

6. HOW TO DETECT SOLVENTS

These key effects should be written down on a chalk board or over head in short form.

- abusers will resemble someone who is severely intoxicated on alcohol
- bad body odor or breath
- bizarre behavior
- eyes will appear red and/or dilated
- grades and attendance in school will go down
- paraphernalia such as Ziploc bags, or empty aerosol cans in possession or hidden in their bedroom
- moody, withdrawn attitude when abuser isn't high
- rash or sores around mouth and nose
- slurred speech

7. HOW CAN YOU PREVENT SOMEONE FROM SNIFFING?

Friends

- **accept others for who they are** - everyone should be treated the same regardless of their looks or what they have
- **be a good friend to others** - always show respect and listen to others problems
- **encourage friends to do well** - encouragement provides support
- **warn your friends** - many people are unaware of the devastating effects so it is important to educate them

8. HOW CAN YOU PREVENT YOURSELF FROM SNIFFING?

- ✓ don't give into peer pressure - take leadership and do your own thing
- ✓ feel proud about your culture
- ✓ participate in fun healthy activities

Additional activity for teens:

It is a good idea to break the students up into groups of four and get them to brainstorm different ways of preventing others from sniffing.

Section 5

Adults

5.1 ADULTS
A) WORKSHOP INFORMATION

5.2 WORKSHOP FOR ADULTS
A) OUTLINE
B) WORKSHOP

5.1 ADULTS

A) WORKSHOP INFORMATION

Some things must be identified before giving a workshop to adults:

- Why are they attending?
- Are they parents, teachers or service providers?
- What is their knowledge on mind-altering substances?
- How much time do you have for the workshop?
- Can you prepare questionnaires or worksheets that the participants can complete during workshop time to promote discussion and more awareness?

It is important for adults to receive information on the effects of solvent abuse and how to detect it. Prevention should also be a significant component in the workshop.

5.1 Workshop For Adults

A) Outline

1. Introduction
2. Does anyone know what solvent abuse is?
3. Commonly abused products
4. Why do people sniff
5. Types of abusers
6. Short term effects
7. Long term effects
8. Dangers of abuse
9. Tolerance and dependance
10. How to detect solvent abuse
11. Treatment
12. How can you prevent someone from sniffing?

B) Workshop

1. INTRODUCTION

Introduce yourself.

2. DOES ANYONE KNOW WHAT SOLVENT ABUSE IS?

Ask the participants if they know what solvent abuse is.

Solvent abuse is when someone inhales solvent products into their lungs to develop a "high".

3. COMMONLY ABUSED PRODUCTS

Ask participants if they know of any products that are misused by people.

Products that are inhaled include:

- aerosol sprays (deodorants, hair sprays, furniture polish)
- cleaning solutions
- hair spray
- lighter fluids
- paint and paint thinners
- plastic cements
- rubber cements
- white out

4. WHY DO PEOPLE SNIFF?

List/write the reasons why people choose solvents over other drugs and then common reasons for any type of abuse. Ask people if they can think of additional reasons. These lists may be written on the board, as well as any additional ideas the participants have. The reasons for abuse can be expanded on from the information below.

Why abuse solvents?	Why abuse?
- available - accessible - concealable - easy to administer - quick - cheap - legally obtainable	- abuse / neglect - boredom - curiosity - excitement - hopelessness - low-self-esteem - inadequate feelings about culture - peer pressure

Solvents are widely available, concealable and easy to use. These products, found around the house give children a quick, cheap, and easy route to escape reality.

Other reasons for abuse:

- **abuse or neglect** - children who experience abuse have difficulty facing challenges
- **boredom** - children desire to escape boredom, however, they often lack ideas and ways of doing this
- **curiosity** - children become curious about the effects of different drugs or choose to seek a variety of experiences
- **excitement** - children are attracted to the element of danger
- **family problems** - they may be too embarrassed to talk about with peers or teachers
- **feelings of helplessness or hopelessness** - children feel they are unable to better themselves
- **low self-esteem** - if teens do not fit in with their peers they will not feel good about themselves
- **not feeling good about culture and heritage** - being misinformed or uninformed sometimes imposes inappropriate feelings about one's culture
- **peer pressure** - pressure to conform to other's behaviors often causes children to participate in activities even if they feel it is wrong

5. TYPES OF ABUSERS

Experimental users (may only try one or a few times)
1) curiosity
2) peer pressure

Recreational users (use solvents occasionally but not on a regular basis)
1) peer pressure
2) boredom and lack of constructive activities to challenge and occupy

Chronic abusers (use solvents on a regular basis)
1) Initial experimental or recreational use

6. SHORT TERM EFFECTS

List the effects on the chalk board or overhead projector and discuss the impact of each with the information below.

Central nervous system depressant (consisting on the brain and spinal cord)
Lasts one hour to an hour and a half depending on the amount inhaled.

Short term

- euphoria
- bizarre behavior
- hallucinations
- lose concentration
- omnipotence
- slurred speech
- vomit
- sudden sniffing death

Directly after inhaling solvents individuals will have:

- **euphoria** - a general feeling of well being
- **bizarre behavior** - the abuser will lose inhibitions and may do things they would not normally do if they were not high
- **hallucinations and delusions** - objects may appear to the individual that are really not there
- **lose coordination** - will appear to stagger
- **omnipotence** -the individual will feel all-powerful and indestructible
- **slurred speech** - the individual will experience slurred speech and may stagger similar to an alcohol induced individual
- **vomit** - the individual may vomit if they pass out on their back and could result in the individual choking on their vomit
- **sudden sniffing death** - Results in death caused by heart failure. After the abuser sniffs, the heart beat speeds up and beats irregularly If the abuser is startled or exerts themselves in physical exercise their heart may stop.

7. LONG TERM EFFECTS

List the common long term effects and mention the paragraph below.

The effects of solvents vary depending on the amount inhaled, duration of abuse and product inhaled. Many of the effects common to solvent abuse are irreversible. Long term effects occur after the user has abused solvents for a long time(months or years).

Long term effects

- brain damage
- fine movement degeneration
- lung, liver, kidney damage
- long/short term memory damage
- lowers immune system
- promotes cancer growth
- respiratory depression

The most common effects are:

- **brain damage (atrophy)** - the brain shrinks in size and brain cells die
- **central and peripheral nervous system damage** - solvents cause depression to the nervous system
- **fine movement degeneration** - makes it difficult to do tasks that requires fine movement, such as drawing
- **lung, liver kidney damage** - some problems may not be noticeable unless checked by a doctor
- **long and short term memory problems** - will be more forgetful and long term memory will be disturbed
- **lowers immune system** - will be more susceptible to cold's and flu's
- **promotes cancer** - Benzene, a product in many solvents, actually promotes cancer growth. Benzene is also found as an ingredient in cigarettes
- **respiratory depression**

- **weight loss** - many abusers experience significant weight loss due to a loss of appetite muscle mass also decreases

Some common chemicals found in many solvent products

benzene - a carcinogenic (cancer producing) compound found in many solvent products.
hexane - a dangerous compound present in glues and adhesive products. Inhalation produces muscular weakness and atrophy.
toluene - this product may result in behavioral and neurological impairments.

8. DANGERS OF ABUSE

Solvent abuse is a dangerous activity. Numerous activities and fatalities occur when the individual is high.

- **asphyxiation** - Occurs when a lack of oxygen enters the brain resulting in brain damage.
- **effect on the community** - Increases mental breakdown, accidents, vandalism, suicide and death.
- **fetal solvent syndrome (FSS)** - The fetus receives devastating effects when the mother abuses solvents while pregnant. The effects can consist of brain damage and physical deformities.
- **highly flammable products** - Many products are highly flammable causing burns.
- **interference with development** - Children encompass a wide array of physical and cognitive changes. Solvents interrupt these changes at the most crucial stage of development.
- **irreversible damages** - Many of the damages that occur are not reversible. Organic brain syndrome occurs when there is shrinking and shriveling of the brain.
- **suicidal tendencies** - Children suffer adverse psychological effects such as: depression, hostility, and feelings of low-self worth.
- **suffocation** - Occurs when an individual loses consciousness with an airtight bag (usually a ziploc) over their face. These are bags commonly used to administer the solvents.

9. TOLERANCE AND DEPENDANCE

It is fine to verbally explain the tolerance and dependence that result from solvent usage.

Tolerance - develops when the body becomes used to a certain level of drug usage. The individual will have to increase dosage if they want to achieve the original effect.

Physical dependence - occurs when the individual experiences withdrawal symptoms such as shakes

Psychological dependence - occurs when the individual feels they need solvents to deal and cope with everyday life

10. HOW TO DETECT SOLVENT ABUSE

After intoxication certain signs to look for are:

You may write this on the board for participants.

Acute Abuse	Long Term Abuse
- anxiety, excitability - irritability - bad breath and body odor - eyes will be red and dilated - intoxicated, confused - dazed appearance - red runny nose - slurred speech - strange odor on clothing	- behavioral changes - change in lifestyle - grades and attendance will go down in school - loss of appetite - mood swings - persistent headaches - rash or sores around mouth

11. TREATMENT

Acute Treatment

It is important to remain calm when you find someone intoxicated on solvents. If you startle or frighten them you may put them at risk for Sudden Sniffing Death. The abuser should receive medical attention immediately. The consumed solvent products should be taken to the medical staff so they can better determine what type of medical treatment to give the patient.

If you find someone:
semi-conscious or in a coma
shaking, trembling, or having convulsions
has severe chest pains

Proceed with the following:

- ✓ open doors and windows to let fresh are in and allow ventilation
- ✓ cover person with blanket or coat to keep them warm without inhibiting breathing
- ✓ retain solvent products for medical staff
- ✓ put the individuals head to the side to prevent them from swallowing their vomit
- ✓ get help immediately

Treatment for Long Term Abuse

Chronic abusers build both a physiological and psychological dependence to solvents. However many of the symptoms are not life-threatening. For that reason, the abuser can be taken right off solvents without having to actually wean them off. Chronic abusers are often malnourished , so it is important they are given a well-balanced diet. Furthermore, it is important the individual receives emotional support.

Withdrawal symptoms abusers may experience

headaches
dizziness
chills
hallucinations
vomiting and stomach cramps
tremors (shakes)
changes in urine (blood and redness)

Most viewpoints suggest that treatment of adolescents must address both substance abuse and other underlying problems in terms of concurrent psychiatric diagnosis, learning disorders, family interaction, internal conflicts, and normal developmental issues of adolescent if treatment is to have long-term impact(Lettieri & Ludford, 1981).

12. HOW CAN YOU PREVENT SOMEONE FROM SNIFFING?

Ask participants what ways they can prevent solvent abuse.

Parent/Caregiver

Be informed of:

- Commonly used mind-altering substances
- Commonly used paraphernalia
- How to detect solvent abuse
- Where to get help

As a parent you can:

- **Promote an open and understanding environment** - that will promote discussion between the parent and child.
- **Model good behavior** - children often watch their parents deal with problems through things such as alcohol or relieve themselves of tiredness
- **Be aware of your actions** - these actions effect your child's behavior and values
- **Set clear guidelines** - children cannot be expected to know what guidelines to follow unless they have clearly set out for them
- **Be consistent** - do not let some things slide just because you are in a good mood
- **Impose good health** - good nutrition, plenty of rest, healthy activities.

Teachers

- know most commonly used drugs
- recognize paraphernalia
- know signs of alcohol
- know how to get help promptly
- look for signs that indicate physical, sexual abuse and/or neglect.
- watch for changes in grades or attendance
- watch for changes in behavior
- create a rapport between teachers and students

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TERMINOLOGY

Affective education - An approach in drug prevention programs that emphasizes the building of self-esteem in conjunction with an improved self-image.

Ataxia - Loss of coordinated movement.

Central nervous system depressants - Decreases central nervous system arousal. They produce an alcohol-like state of intoxication when used in a non-medical and excessive way.

Delirium Tremens (DTs) - A syndrome of tremulousness, with hallucinations, psychomotor agitation, confusion and disorientation, sleep disorders. Has been recognized to follow chronic solvent abuse.

Disinhibition - A physiological state within the central nervous system that receives decreased activity of inhibitory synapses.

Drug abuse - Drugs that are used in a way to produce some sort of impairment.

Ether - An analgesic that is that is highly flammable.

Euphoria - A general feeling of well-being.

Hallucinogen - Ability to create visual, auditory, or other changes in cognition and perception.

Hypoxia - A deficiency of oxygen intake.

Inhalation - Inhaling a substance in the form of gaseous or vaporous state. Substances traveling from the lungs to the brain will take only five to eight seconds to reach the brain.

Psychoactive drugs -Drugs that affect our feelings, perceptions and behavior. Solvents have a psychoactive affect on us.

Peer refusal skills - Techniques by which and individual can resist peer pressure to use drugs.

Sniffing - As referred to on the street, the practice of inhaling vapors for recreational purposes.

Solvents - Substances in which materials may be dissolved.

Solvent Abuse - the inhalation of solvent products producing physical, mental or social impairment.

Substance dependence - Also termed, addiction. This severe abuse occurs when there is a physiological dependence on the drug.

Tolerance - The body becomes tolerant to the effects, thus the individual will need more substances to induce a high. The effects of the drug will be less if the usual amount is taken.

Values clarification - An approach in drug prevention programs which is conducive to positive social values and attitudes.

PLACES TO ACCESS HELP

Aboriginal Organizations

Nechako Fraser Junction Metis Association

409-3rd Avenue
Prince George, B.C.
V2L 3C1
Phone: 564-1167
Fax: 564-1541

Apehtaw Kosisan Metis Child & Family Support Society

730 -2nd Avenue
Prince George, B.C.
V2L 3A3
Phone: 564-5353
Fax: 564-5352

Carrier Sekani Family Services

#805 - 299 Victoria
Prince George, B.C.
V2L 5B8
Phone: 563-3591
Fax: 562-2272

Native Friendship Centre

144 George Street
Prince George, B.C.
V2L 1P9
Phone: 564-3568
Fax: 563-0924

Alcohol and Drug Agencies/Programs

Solvent Abuse Prevention Program

Nechako Fraser Junction Metis Association
409 3rd Avenue
Prince George, B.C.
564-1167

This program provides Solvent Abuse Prevention Workshops for children, teens and adults. Resource Kits and Workshop Manuals are available for teachers and service providers. This program does referrals.

Drug and Alcohol Program Youth Drug and Alcohol Program

Native Friendship Centre
144 George Street
Prince George, B.C.
V2L 1P9
562-4738

Provides native counselors for outpatient drug and alcohol counseling. Accommodates native people only.

Alcohol and Drug Services

1705 3rd Avenue
Prince George, B.C.
V2L 3G7
562-8112

Outpatient counseling service for people with problems related to alcohol or drugs, may also be friends or relatives. General prevention counseling, education and information provided. Provides referral services as well.

Health Centres

Central Interior Native Health Centre

1110-4th Avenue
Prince George, B.C.
V2L 3J3
564-4422

Set up parenting program and help with family planning. Has child health clinic and provide diabetes information. Native healing is a strong component in the program.

Child and Family Clinic

4186-15th Avenue
Prince George, B.C.
V2M 1V8
565-6912

Interdisciplinary team for clinical assessment and intervention for child abuse. Referral are taken by Doctors, Ministry of Social Services and R.C.M.P.

Education/Cultural Development Program

Headstart

Awasisak Cultural Development Program
1224 Houston Lane
Prince George, B.C.
V2L 5G2
564-6840

Has pre-school classes (3-5 years) for Metis children. Learn Metis culture, history and Cree language. No charge for enrollment however parent/s must volunteer some time to the program.

START

Stay In School Initiative For Prince George Youth
Native Friendship Centre
144 George Street
Prince George, B.C.
V2L 1P9
563-0924

Entrants must be 13 to 18 years of age and pass recommendation meeting by START facilitators. Build self-esteem, cultural awareness and upgrades academic skills. START courses include mathematics, English, physical education, and power learning units.

Family Support Services

Carrier Sekani Family Services

1274 5th Avenue
Prince George, B.C.
V2L 3L2
562-3591

Family care workers visit homes, and provide information and counseling for children and families.

Apehtaw Kosisan Metis Child & Family Support Society

730 - 2nd Avenue
Prince George, B.C.
V2L 3A3
564-5353

Provides support, referrals, and advocacy for Metis families.

Counseling For Children And Families

Intersect Youth and Family Services Society

1294 - 3rd Avenue
Prince George, B.C.
V2L 3E7
562-6639

Provides counseling for children, youth and their families. Support group for parents that are having difficulties with their teens. Deals with young offenders teaching them life and wilderness programs.

Child Development Centre

1687 Strathcona Avenue
Prince George, B.C.
V2L 4E7
563-7168

Assessment of physically handicapped children to age 19. Offers speech therapy, occupational therapy, physiotherapy and day care. Provides counseling for family of handicapped children.

Programs for Women and Children

Child Care Support Program

890 Vancouver Street
Prince George, B.C.
V2L 2P5
563-2483 or 563-0033

Registry for all types of day care administered by the Prince George Family Y.

Advocacy for Women and Children

199 Quebec Street
Prince George, B.C.
563-1214

Advocate for women, children and female teens regarding violence and child prostitution. Operates a shelter for women at risk. Has clothes available for women and children.

Children Who Witness Violence Counseling Program

Phoenix Transition Society
1770-11th Avenue
Prince George, B.C.
V2L 358
563-7315

Provides individual and group counseling for children and adolescence. Provides support for children who have witnessed or experienced abuse in their families. Support group for parents to help them recognize the impact abuse has on their children.

Youth Programs

Reconnect Street Program

Native Friendship Centre
144 George Street
Prince George, B.C.
562-2538

Provides support and outreach counseling to young people who live on the street. Give lifestyle and pre-employment counseling. Has a recreation program and sponsors teens dances and other functions.

Carney Hill Neighborhood Center

2579 Victoria Street
Prince George, B.C.
V2L 2M3
562-3591

Provides social, leisure, and educational services in the Carney Hill area.

U.N.I.T.Y.

Understanding Needs Inspired by Today's Youth
#201 - 2666 Queensway
Prince George, B.C.
V2L 1N2

Provides services for youths and recreation activities. Has peer counseling, and provides programs that target current issues such as; smoking, sexual education, and teen pregnancy.

Referral Services

Crisis Information Centre

1306 7th Avenue
Prince George, B.C.
V2L 3P1
564-5736

Provides confidential counseling for people. Provides information and referrals.

NOTES

NOTES

NOTES

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THE BRAIN AND SOLVENTS

Central Nervous System (CNS)

The central nervous system consisting of the brain and spinal cord becomes depressed when the individual abuses solvents.

The Brain

The older and more primitive parts of the brain tend to be underneath the newer and more sophisticated ones. The midbrain and forebrain have evolved ever more recently and have a greater involvement in complex behaviors.

Hindbrain

Medulla
Lies at the point of the hindbrain where the enlargement begins. The medulla is the coordinator of our life-support systems in our body. It controls blood pressure, breathing heart rate, digestion, and even vomiting. Without the normal functioning of the Medulla death with would be seconds away. The medulla is highly sensitive to alcohol, barbiturates and inhalants all of which are depressants. These drugs in extremely high dosages the respiratory controls in the medulla are inhibited and death can result in asphyxiation. If the individual survives the lack of oxygen in the blood while they are not breathing can result in brain damage. Fortunately, the vomiting center in the medulla is sensitive to the presence of poisons in the blood and is able to initiate vomiting to rid the body of unwanted harmful substances.

Pons
The Pons, situated immediately above the medulla maintains necessary levels of alertness to survive. The reticular formation within the pons that energizes the rest of the brain to be alert to incoming information. Drugs such as inhalants, suppresses the activity of this brain region. Inhalants cause an individual to feel drowsy a couple hours after heightened intoxication and causes insomnia and abnormal sleep patterns. Serious damage the this system could cause a coma.

Cerebellum
An important structure for posture, the maintenance of balance and for the execution of smooth movements of the body. Dizziness and lack of coordination experienced after sniffing solvents is related to the inhalants depressive effect on the cerebellum.

The Midbrain

The midbrain is located just above the hindbrain. It is a center for the control of important sensory and motor reflexes. A major portion of our processing of pain information is handled by the midbrain as well. e.g. getting burned and instinctively moving our hand.

The Forebrain

Hypothalamus and Limbic System
The upper most section of the brain, above the midbrain consists of the hypothalamus and the limbic system It helps us carry out appropriate motivational and emotional acts that ensure our survival as a species. Feeding, drinking, and sexual behavior are controlled by the hypothalamus.

Cerebral Cortex
This portion is devoted to processing sophisticated information. The part of the brain most vital to our ability to think and reason.

Biochemical processes underlying drug tolerance

Tolerance is a result of two types of physiological processes.
- liver - (metabolic dispositional tolerance) Repeated administrations the processed that produce the drug's chemical breakdown in the liver. When the liver metabolizes the drug faster than previously a smaller amount is left for absorption into the blood.
-neuron - (cellular pharmacodynamic tolerance) Changes occur in the synapses of neurons themselves. Receptors that have been stimulated by the drug repeatedly may become less sensitive and the effect on the receiving neuron at a synapse may be diminished.

THE BRAIN AND SOLVENTS

Central Nervous System (CNS)

- consists of the brain an spinal cord
- becomes depressed when the abusers uses solvents

The Brain

- older more primitive parts of the brain are underneath the newer more sophisticated parts

Hindbrain

Medulla

- lies at the point of the hindbrain where the enlargement begins
- it is the coordinator of all life-support systems
    - blood pressure
    - breathing
    - digestion
    - heart rate
    - vomiting
- sensitive all depressants such as; alcohol, inhalants, barbiturates
- high dosages can result in:
    - → asphyxiation - occurs when the respiratory in medulla are inhibited and death can result
      - survivors suffer from brain damage from the lack of oxygen in the blood
    - → vomiting - the medulla is sensitive to the presence of poisons in blood and is able to initiate vomiting

Pons

- situated above the medulla
- maintains level of alertness to survive
- energizes the rest of the brain to be alert to incoming information
- inhalants suppress the activity of this brain region
- inhalants cause drowsiness after the heightened intoxication
- serious damage to this system could cause a coma

Cerebellum

- important structure for posture, the maintenance of balance and for the execution of smooth movements of the body
- dizziness and lack of coordination experienced after sniffing solvents is related to the inhalants depressive effect on the cerebellum

Fetal Solvent Syndrome

Fetal Solvent Syndrome is commonly characterized by:

- prenatal growth retardation (low birth weight)
- microcephalagy
- facial dysmorphism (resembling that of Fetal Alcohol Syndrome)
- digital malformations
- short phalanges
- nail hypoplasia
- preterm delivery
- neonatal electrolyte disturbance
- low birth weight
- growth retardation
- developmental delays
- minor craniofacial anomolies
  - short palpebral fissures
  - flat/wide nasal bridge
  - deficient philtrum
  - micrognathia

FSS is similar to FAS

These described teratogenic features are extremely similar to those associated with FAS. This similarity of features may be due to the pharmological similarity between alcohol and the volitle solvents and inhalants or to the mother's possible concomitant use of alcohol. Pearson et al. (1994).

Specific Inhalant Effects

Gasoline

No controlled studies are published of congenital anomalies in infants born to women who engaged in gasoline inhalation during pregnancy. Two infants with profound mental retardation, neurologic dysfunction, and minor dismorphic features whose mothers had abused gasoline by inhalation during pregnancy were described in a case report (Hunter et al., 1979).

Toluene

Toluene is a aromatic organic solvent used in glue, spray paint and paint thinner. Toluene abuse is known to produce cerebral atrophy in adults (Filley et al., 1990; King, 1982; Larsen & Leira, 1988) and it seems plausible that it would cause the same damage to the utero.

A pattern of unusual dysmorphic features that was suggestive of "toluene embryopathy" was described in three children who were born to women who frequently inhaled large amounts of toluene throughout pregnancy (Hersch et al., 1985). Two additional cases of "toluene embryopathy" with similar characteristics were later reported (Hersh), 1989); these five children from two case reports by Hersh had a variety of abnormalities (Table 32.1).

cerebral atrophy - means an actual reduction in brain mass

Table 32.1 Clinical Findings in Toluene Embryopathy

Characteristic	Frequency (n = 5) (%)
Abnormal scalp hair patterns	40
Narrow bifrontal diameter	100
Short palebral fissures	100
Deep-set eyes	100
Small midface	100
Low-set prominent ears	100
Micrognathia	100
Spatulate (blunted) fingertips	100
Attention deficit	80
Hypotonia	80
Microcephaly	80
Small fingernails	80
Small nose	80
Abnormal palmar creases	60
Hyperreflexia	40
Renal anomoly	40
Deficient philtrum	40

From Hersh. 1989 and Hersh et al., 1985.

microphaly - abnormally small head circumference

abnormal palmar creases - abnormal creases in the palm of the hand

hypotonia - having deficient tone/tension

hyperreflexia - having defiecient reflexes

Table 2- Physical and Mental Effects of Commonly Abused Solvents

Volatile Solvent	Corresponding Chemical Compound	Physical Effects	Mental Effects
		Impairment or damage to	Impairment or or damage to
Rubber cement	Benzene	Bone Marrow Liver Heart Adrenal Glands Kidneys *(Chromosomes)	
Glue Thinner	Xylene Toluene	Same as Benzene Benzene	Brain-Central Nervous System (CNS)
Spot Remover	Carbon Tetrachloride	Lung, liver Kidney	
Plastic cement	Hexane		Nerve Damage
Lighter Fluid	Naptha	Mild Poisoning	
Aerosols	Flouro methane	Cardiac Arrest & Palpitations Respiratory Tract & Larynx & Bronchial Tubes	
Fingernails Polish Remover	Ketone	Mild Poisoning	
Dry Cleaning	Ethylene	Kidney Liver Pancreas Cardiac Problems	CNS
Gasoline		Same as Benzene, plus gastro-intestinal and lung damage	CNS

*Note - signifies suspected damage

Source: N.A. Solvent Use / Abuse Among the Canadian Registered Indian and Inuit Population. An Overview Paper. No publisher. (1986). Page 12.

Symptoms	Morbidity Effects	Mortality Effects
Restlessness	Loss of appetite	Cardiac arrest and failure
Impairment of perception and cognitive skills	Anemia, loss of weight, loss of memory, loss of sleep	(SSD - Sudden Sniffing Death - suffocation)
Loss of emotional and behavioral control	Nausea, vomiting, diarrhea, ear, chest, and body pain, chronic coughing, constant thirst, facial rash (around mouth and nose)	Asphyxiation Disorders of central and peripheral nervous system, accidents poisoning and violence

Source: N A. Solvent Use / Abuse Among the Canadian Registered Indian and Inuit Population. An Overview Paper. No publisher (1986) Page 13.

Nechako Fraser Junction Metis Association

Solvent Abuse Prevention Program

File # HQ 96/97 - 013 SI

Final Report

March 31, 1997

Nechako Fraser Junction Metis Association

Solvent Abuse Prevention Program

File # HQ 96/97 - 013 SI

Final Report

March 31, 1997

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A. Introduction

The Solvent Abuse Prevention Program at the Nechako Fraser Junction Metis Association fosters solvent abuse prevention by providing awareness to Prince George and surrounding areas. Solvent abuse is a world wide problem that effects everyone, not only those directly involved with the abuse of solvents. These products are particularly attractive to the young because of their availability and low cost. Solvents are household or commercial products that are easily masked by its abusers because of their legitimate uses. Nonetheless, the deliberate inhalation of these volatile solvents and aerosols continue to be an increasing problem that often neglects to be addressed in many communities.

The Nechako Fraser Junction Metis Association felt there was a need to address the issue of solvent abuse in Prince George and surrounding areas. Far too many children ruin their lives and future from misusing solvents. In order to address this issue the program provided solvent abuse awareness to the Northern Central British Columbia Region. This was achieved by distributing pamphlets, resource materials and delivering workshops. Problems that exist in our society will only escalate unless the issues are addressed. We theorize that problems can not be addressed unless awareness and education is achieved.

Solvents have often been identified as being first mind-altering product that may be abused by a child, sometimes as early as age five. Solvents have been considered a 'gateway drug' that may promote the use of other drugs that are considered to be more serious. However, solvents are as harmful and fatal as any

other drug abused on the street. This central nervous system depressant puts individuals at risk for many devastating short and long term adverse solvent abuse effects. It has been our goal to provide awareness to inhibit or reduce the severity of solvent abuse in our community and surrounding areas.

B. Status of the Project

The Solvent Abuse Prevention Program, initiated May 28, 1996, has successfully terminated March 31, 1997.

C. Detailed Program Information

Deliverables

The Solvent Abuse Prevention Program completed all deliverables. Some of the deliverables included Pamphlets, Resource Kits, Workshop Manuals, and an Internet Home Page.

C.1 Pamphlets

Three pamphlets are produced for distribution across British Columbia. Many schools, health clinics and other service agencies have received these pamphlets to provide solvent abuse awareness. Metis and First Nations art is included in the pamphlets to help promote cultural awareness. Very often, pamphlets are only generated for an adult audience. Obviously, this is ineffective in getting the message across to children and youths. Therefore, three separate pamphlets have been

produced specifically for three different audiences; children, teens and the general public. The pamphlets include the following information. **Refer to Appendix A.**

a) Children

- Ever Heard Of Solvent Abuse?
- Can You Name Some Solvents?
- How Will You Feel If You sniff?
- What If I Sniff?
- Right Now
- In The Long Run
- Can You Prevent Yourself And Others From Sniffing?
    - Yourself
    - Others
- Can Someone You Know Help?
- Do You Want To Find Out More?

b) Teens

- Have You Ever Heard Of Solvent Abuse?
- Can You Name A Solvent?
- Why Do You Think People Want To Sniff?
- What Can Happen To You If You Sniff?
- How Can You Avoid Becoming A Sniffer?
- Would You Be Able To Tell If Your Friend Was Sniffing?
- It Hurts Your Community!
- If You Have a Problem With Sniffing Who Can You Talk To?
- Where Can You Go For Help?

c) General Public

- What Is Solvent Abuse?
- Why Do People Choose Solvents?
- Dangers

- Short Term
- Long Term
- How To Detect Solvent Abuse
- Who Can Help?
    - Yourself
    - Friends
    - Parents
- Where To Go For Help

C.2 Teachers Resource Kit

Resource Kits have been prepared and bound primarily for teachers. These kits include extensive information on the effects and dangers of solvent abuse. In addition, it provides ways teachers may detect solvent abuse and places they can access help for their students. Very often, teachers are uninformed of what is offered to their students in the Prince George area, thus, agencies and programs are included in the kit for their reference. The package is distributed to teachers during Professional Development Day, as well as when workshops are given to their classroom. **Refer to Appendix B**.

C.3 Workshop Manual

A Workshop Manual has been produced for anyone who desires to present workshops to children, teens and the general public. This valuable manual will allow caregivers and teachers the ability to aid in the solvent abuse prevention effort. **Refer to Appendix C**. The four different workshops available in the manual are:

- Kindergarten to grade three

- Grade three to grade seven
- Teens
- Adults

C.4 Internet / Solvent Abuse Prevention Home Page

Using the Internet granted our program extensive and valuable information on solvent abuse. It also assisted us in the development of our Pamphlets, Resource Kits and Workshop Manuals. The Solvent Abuse Prevention Program home page is set up on the Internet. The address is <http//:www.pgweb.com/nfjma>. **Refer to Appendix D**

The home page offers information including:

- Solvent Abuse Prevention
- Solvents
- Solvent Abuse
- Why Abuse Solvents?
- Types of Abusers
- Short Term Effects
- Long Term Effects
- Tolerance and Dependence
- Dangers
- How to Detect
- How Can Different People Help?

Many teachers, and other service providers requiring information about our program were able to access this information the Internet. The Solvent Abuse Prevention Programs e-mail address was also included for people wanting to find out more information regarding solvent abuse and our program.

Workshops

C.5 Professional Development Day

Professional Development Day is a day in which teachers are able to take the day off regular school and set time aside to take workshops. Professional Development Day gave the Solvent Abuse Prevention Program excellent exposure. We had the opportunity of presenting workshops during Pro D-Day. These workshops were three hours in length and included handouts, exercises and the viewing of a couple videos. Workshop evaluations are filled out by all those in attendance. We found a large population of the teachers were Non-Aboriginal, thus we found it important to illuminate problems that Aboriginal children encompass. In the last decade universities have made First Nation Studies a required course in most programs, however, many teachers who graduated before this are not aware and sensitive to the issues Aboriginal people endure. Therefore, we feel culture is an important component of these workshops.

C.6 Service Providers Workshops

We arranged three dates to deliver workshops targeting service providers in our area, as well as doing workshops on an on-going basis to several service agencies. The workshops were two hours in length. A copy of the workshop used for service providers is presented in **Appendix E**.

Comments gathered from the workshops

- I found it very informative, amazing the things they use!

Kari Eisner, UNBC student

- The workshop manual is a great resource to have. The workshop was informative and gave me insight into the problem of solvent abuse in Prince George with children. Great to bring an elder in and speak on the subject.

Tonia Strubin, UNBC student

- Found facilitator educated in answering all questions. Unfortunate that funding is no longer available because many people could benefit a lot.

Raylene Bryce, Sunridge Group Home

- Very well organized workshop and the information package was very thorough. I see a strong need for those individuals working with children to become familiar to the signs and dangers of solvent abuse.

Camille Colbert, Intersect Family Services

C.7 School Workshops

Solvent Abuse Prevention Workshops were held at the following schools and service agencies:

Chetwynd

Chetwynd Senior Secondary School

Dokie Elementary School

Don Titus Elementary School

Moberly lake Elementary School

Fort St. James

Saint Maria Goretti Elementary School

Fort St. John

Central Fort St. John School

Charlie Lake Elementary School

Duncan Cran Elementary School

Robert Ogilvie Elementary School

Fraser Lake

Fraser Lake Elementary School

Granisle

Babine Lake Elementary

Prince George

Carney Hill Elementary School

D.P. Todd Senior Secondary School

Giscome Elementary School

Meadow Lake Elementary School

Peden Hill Elementary School

Prince George Senior Secondary School

Quinson Elementary School

Ron Brent Elementary School

Seymour Elementary School

Spuceland Elementary School

Smithers

Muheim Elementary School

Lake Kathlyn Elementary School

Williams Lake

Crescent Heights Elementary School

Soda Creek Elementary School

Correction Centers

Youth Containment Center

Prince George Regional Correction Center

Group Homes

Safe House - Prince George Native Friendship Center

Other

Aboriginal Shield Program

Nak'azdli Health Centre

Soda Creek Band Office

Tansi Friendship Centre

Little Prairie Parent Advisory Committee

Fort St. John General Workshop (for parents and service providers)

D. Project Summary

D.1 Successes and Challenges

We feel very confident about the success of the Solvent Abuse Prevention Program. We received a positive response from those individuals who received workshops and others who had just heard about the program. Many service providers do come into contact with individuals who abuse solvents, therefore, desire to find out more about the effects and why people choose to abuse solvents. Since the program will not continue to operate next year the workshop manuals will be very helpful to those service providers who wish to give workshops their clients and other staff members.

Another success, that the program encountered was that teachers were often able to identify children at risk for abusing solvents. As mentioned before, many children disclose that they abuse solvents during the workshop. Without the Solvent Abuse Presentation being delivered in their classroom the teachers might not have found out what students were at high risk until it was too late.

A challenge that the Solvent Abuse Prevention Workshop encountered from time to time, was some school principals were hesitant to bring the Solvent Abuse Prevention Program into their schools. This was because they felt if the children were

introduced to solvents curiosity might entice the children to it. Many principals believe that children have not heard of solvent abuse. However, we found that many children have already heard of solvent abuse and had been exposed to it in one way or another. This was displayed by their comments at the beginning of the workshop when they often provided their definition of solvent abuse. Which was always correct.

At the end of every workshop I asked children how they could prevent others from sniffing. The first answer would usually be, "tell them what solvents could do to you". Informing children of the long and short term effects is a primary form of prevention. A form of prevention that should be introduced before drug taking behavior has ensued. Education, for the most part is the best form of prevention. The fact that an abuser can die numerous ways from misusing solvents the first time they try it, is often very surprising to most young individuals. The information received at these workshops will hopefully be passed on to their peers and siblings.

E. Anticipated Problems

Since this program has only been running for two years a lot of time was still spent networking when the program could have been presenting workshops. Some out of town communities missed our workshops due to a conflict with their school schedule or a conflict with ours. This was unfortunate, that these schools could not and will not be visited by our program. We sent Workshop Manuals and Resource Kits to these schools in hope that they will take the initiative to present their own prevention workshop.

Our program was the only Solvent Abuse Prevention Program in the Northern Interior British Columbia Region. We feel that solvent abuse is a problem in this area and was displayed by the numerous disclosures that we received during workshops. Hopefully, there has been enough resources developed and distributed to help other people combat or reduce the prevalence solvent abuse without an on-going program to access.

F. Financial Claim

Money supplied to the program was spent according to the financial claim. Financial Claim to follow by fax March 31st.

G. Suggestions and Reccomendations

We feel that this program ran successfully, therefore we do not have many suggestions. In the beginning, most trips to different communities were only allotted one day to each location. Obviously, one day is not enough time to cover a few different schools. Then, the program was supposed to visit neighboring towns or cites during the same trip. Often, it is difficult to coordinate trips to ensure this is possible. Many schools have there own in-school functions going on. Not too mention, there has to be travel between each community. After a long day of workshops and traveling in between communities to arrive at your next set of workshops makes for a very long day. I would not suggest a coordinator is gone for longer than four days at

a time. A coordinator must be alert and semi-rested to deliver a workshop, therefore any time longer than five days would not be as beneficial to either party.

If possible, the coordinator should be able to attend a solvent abuse workshop themselves. Round Lake has been suggested to be a very informative and a highly recommended training program. This should be done at the beginning of the coordinators term. Materials and resources on solvent abuse is not as popular or available as other drugs such as: alcohol, marijuana and cocaine. Therefore, the coordinator has to spend a lot of time in the beginning, searching for the resources. For this reason, I feel attending a workshop such as this would be beneficial.

Another recommendation would be to try and keep the same coordinator as the previous year. Coordinators must establish trust within schools which is received by being known throughout the school system. Also, the coordinator has to learn an immense amount of knowledge to be an expert on the subject that enables them to present workshops. To be able to build on previous experience and knowledge from the prior year would be truly advantageous for the coordinator.

Also, if possible the program should be extended to run until the end of the school year. Many children are missing out on months that they could be receiving workshops. Obviously, a lot of setting up for workshop dates can not be done until the second week in September as most of the schools are just beginning to get used to their schedule. Therefore, workshops can not commence until late September.

H. Conclusion

We feel the Solvent Abuse Prevention program gained a lot of exposure during the 1996/97 year. Towards the end we actually had teachers and other service providers request our program to deliver workshops to their school or agency. Many service providers also, strived to attend the last few service providers workshop because they realized is was the last year the program was operating.

The program visited many schools in Prince George and surrounding areas. Throughout this time we were able to recognize problems inherent in several schools. Solvent abuse, on a experimental basis does not appear to be restricted to any economic or geographic boundaries it appears to be existent everywhere. Children in the lower primary grades engaging in solvent abuse often do not even acknowledge they can receive any mind-altering effects. Many children try it because they think it smells good i.e. gas. Otherwise, they try it because they see other people abusing solvents. Habitual, and chronic abusers appear to reside in areas where their is lower income housing. These individuals often have low-self-esteem and do not have high aspirations for the future. These abusers also appear to be located in isolated areas where there is a lack of constructive activities and feelings of helplessness and hopelessness are present.

Many teachers do not have an action plan to implement after they have discovered that one of their students abused solvents. Obviously, there was not a secondary solvent abuse prevention program, thus most of the teachers felt helpless as help was not exactly one step away. Some of the services in Prince George have

lengthy waiting lists or require certain criteria to be accepted into their program. Many of the students feel that the some of the services offer judgmental counselors where they felt uncomfortable and intimidated talking about their problems. With the use of the Workshop Manual the proactive teachers will be able to accommodate their students

Appendix A: Pamphlets

a) Children
b) Teens
c) General Public

Have you ever heard of SOLVENT ABUSE?

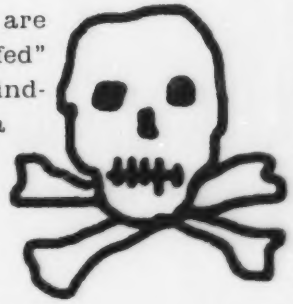
Solvent abuse is when substances are "sniffed" through the nose or "huffed" through the mouth to produce a mind-altering effect, otherwise known as a "high".

Can YOU name a SOLVENT?

- felt marker
- glue, gasoline
- hair spray
- liquid paper, lighter fluid
- plastic cement, paint

Why do you think people want to sniff?

- a desire to be accepted by others
- negative peer pressure
- social pressure to look and act in certain ways
- to get rid of boredom
- to experiment

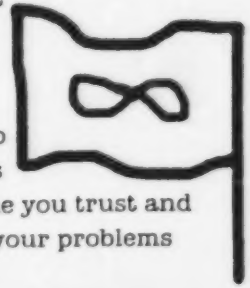


What can happen to YOU if YOU sniff?

- damage your heart, liver, kidneys
- kill brain cells
- possible cancer growth
- have more colds
- unsteadiness, weakness
- laziness
- depression, moodiness
- sudden sniffing death

How can YOU avoid becoming a sniffer?

- live a healthy lifestyle
- make the right decisions, trust your instincts
- find out more about your ancestry and culture
- feel good about yourself and your heritage
- don't feel bad about saying no to your friends
- talk to someone you trust and respect about your problems



Would you be able to tell if your friend was sniffing?

- rash around mouth and nose
- bad body odour and breath
- slurred speech, poor muscle coordination
- excessive sneezing, coughing
- noticeable laziness and personality changes

It hurts YOUR community!

- physical and sexual abuse
- mental breakdown
- alcohol abuse
- crime
- accidents
- vandalism
- unhappy families
- suicide and death

If you have a problem with sniffing who can YOU talk to?

- family
- friends
- elders, clergy
- school teachers
- counselors

Where can you go for help?

Nechako Fraser Junction Metis Association

(604) 564-1167

Refer to our web site at:
http//:www.pgweb.com/nfjma or
e-mail until March 31, 1997
<solvent@.pgweb.com>

Drug & Alcohol Program
at the Prince George Native Friendship Centre
(604) 564-3539

Teen Crisis Line
(604) 564-8336

Brought to you by:

Nechako Fraser Junction Metis Association

409 - Third Avenue
Prince George, B.C.
V2L 3C1

Telephone: (604) 564-1167
Fax: (604) 564-1541

please use area code 250 after October, 1996

Funded by:
Department of National Health & Welfare

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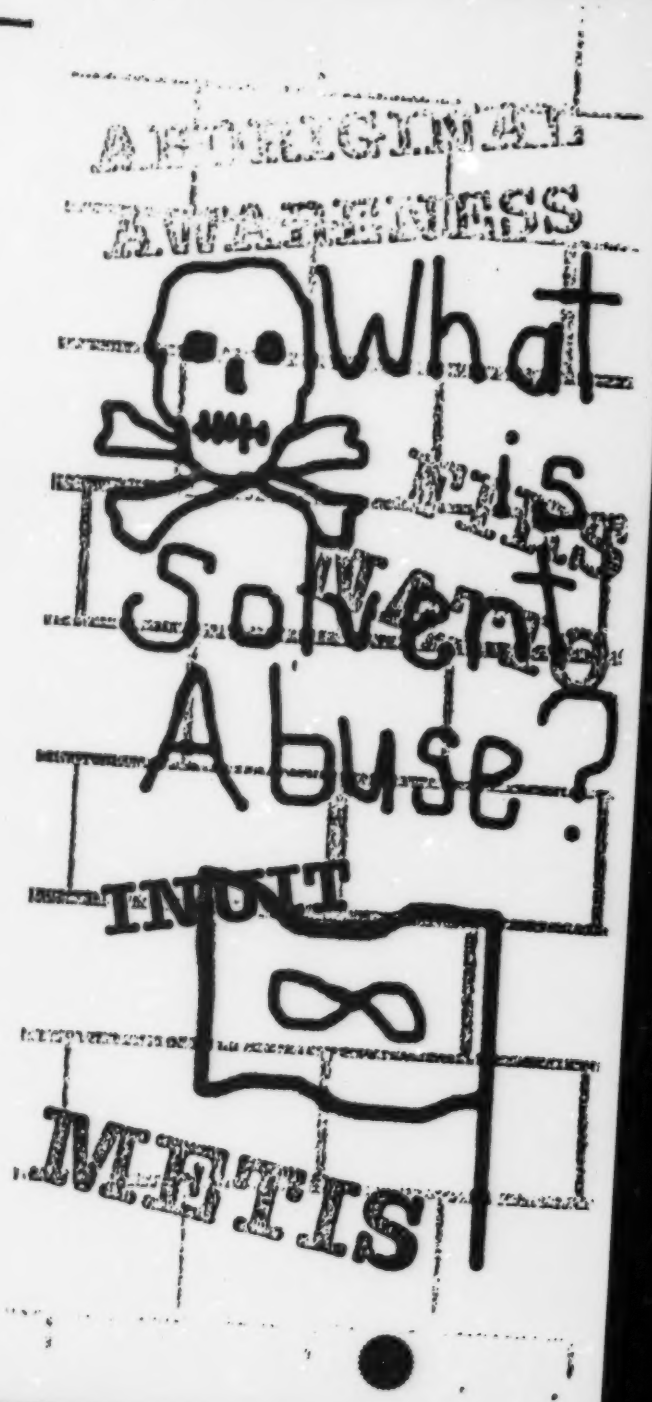

Bringing Awareness to Aboriginal People

Have you ever thought someone you know may sniff Solvents?

WHAT IS SOLVENT ABUSE?

Solvent Abuse occurs when people use household or commercial products to get "high". Some commonly used products are; felt marker, glue, gasoline, hair spray, liquid paper, lighter fluid, plastic cement and paint.

WHY DO PEOPLE CHOOSE SOLVENTS?

- available, inexpensive, easily concealable
- no law enforcement against it
- the desire to escape problems and forget reality surpasses the desire to remain healthy

DANGERS

Short Term

- slurred speech
- impulsive behaviour
- loss of touch and pain sensation
- depression, laziness
- short term memory loss
- sudden sniffing death caused by heart attack or suffocation

Long Term

- encourages cancer growth
- produces liver dysfunction
- causes immune system to go down
- damages lungs
- kills brain cells

HOW TO DETECT SOLVENT ABUSE

- dilated pupils
- reddened eyes
- strong odour on breath or clothing
- reckless behaviour
- evidence of rags, empty aerosol cans or containers
- change in personality

WHO CAN HELP?

Yourself

- make healthy choices
- don't be afraid to get help
- feel good about yourself

Friends

- set good examples
- be positive role models
- be a good listener
- be supportive

Parents

- provide an open understanding environment
- encourage discussions
- recognize the accomplishments of your kids

Everyone in the community must actively participate to prevent Solvent Abuse. Pride in Aboriginal heritage, culture, and traditions is one key to a healthy community. Find out what your culture and traditions are!

Where to go for Help

Nechako Fraser Junction Metis Association

(604) 564-1167

Refer to our web site at:
http//:www.pgweb.com/nfjma
or e-mail until March 31, 1997
solvent@pgweb.com

Drug & Alcohol Program at the Prince George Native Friendship Centre

(604) 564-3539 (youths)
(604) 562-4738 (adults)

Teen Crisis Line

(604) 564-8336

Crisis Centre

(604) 563-1214

Brought to you by:

Nechako Fraser Junction Metis Association

409 - Third Avenue
Prince George, B.C.
V2L 3C1

Phone: (604) 564-1167
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or e-mail until March 31, 1997
solvent@pgweb.com

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ABORIGINAL AWARENESS

SOLVENT ABUSE

What do you know about it?

METIS • FIRST NATIONS • INUIT

Metis • First Nations • Inuit • Metis • First Nations • Inuit • Metis • First Nations • Inuit

Ever heard of SOLVENT ABUSE?

It happens when someone breathes in poisons in order to feel 'different' or 'high'.

Can you name some solvents?

Gas	Glue
Cement	Liquid Paper
Hair Spray	Paint
Felt Marker	

YUCK!

How will YOU feel if YOU sniff?

- different or high
- upset
- dizzy and numb
- tired, you might pass out
- you might have chest pains

What if I sniff?

Right now...

- grades in school will go down
- stomach will ache
- will feel lazy
- will feel sick
- and much, much more . . .

In the long run...

- will hurt your heart, lungs and liver
- will hurt your sight and hearing
- might cause you to try other drugs

Can you prevent yourself and others from sniffing?

YES!

Yourself

- just say **NO**
- do fun, healthy activities
- feel good about yourself
- find out more about your heritage and be proud of it
- get help! Remember you are not alone!

Others

- be a good friend
- be a good listener
- treat others with respect
- set good examples for others
- remember, everyone has feelings

MAKE GOOD CHOICES

MAKE YOUR OWN CHOICES

Can someone YOU know help?

Family, friends, teachers, counselors, elders, people YOU trust and respect

Do YOU want to find out More?

- Nechako Fraser Junction Metis Association (604) 564-1167
- Drug and Alcohol Program @ Prince George Native Friendship Centre (604) 564-3539
- Teen Crisis Line (604) 564-8336
- or other places like these that are in your community

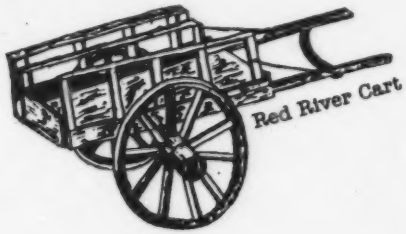
Brought to you by:

Nechako Fraser Junction Metis Association

Solvent Abuse Prevention

409 - Third Avenue
Prince George, B.C.
phone: (604) 564-1167
fax: (604) 564-1541

please use area code 250 after October, 1996



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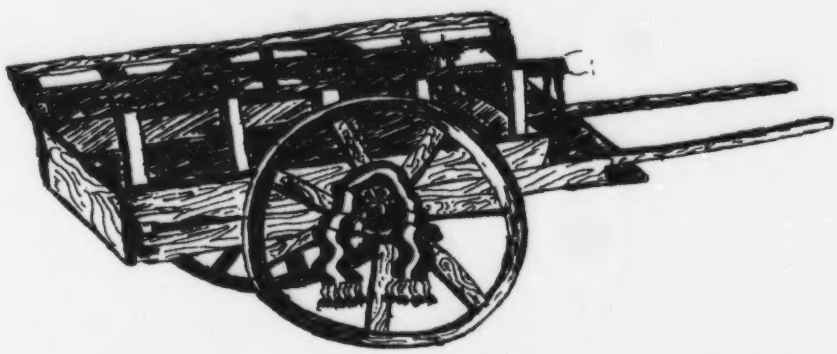
HEY KIDS!

What do you know about SOLVENT ABUSE?



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Appendix B: Teachers Resource Kit

Refer to grey folder

Appendix C: Workshop Manual

Refer to White Binder

Appendix D: Solvent Abuse Prevention Home Page

Nechako Fraser Junction Metis Association
Solvent Abuse Prevention Program

SOLVENT ABUSE PREVENTION....IT'S HERE

Solvent abuse prevention is an important mechanism to keep our children healthy and high spirited. It is extremely important for people to know how to recognize solvent abuse before irrecoverable damages occur. It is not widely acknowledged that children will die, now, and in the years to come, from abusing solvents; or that others will put themselves at risk for a number of long term damages. Unfortunately, parents, educators, and others predominantly associated with children are often uninformed of the causes, dangers and effects of solvent abuse.

The goal of the Solvent Abuse Prevention Program is to provide solvent abuse awareness to the community, targeting Aboriginal off-reserve children. We believe informing the community about the effects and dangers of solvent abuse will generate interest and responsibility essential to helping our children. It is necessary for communities to actively participate in the prevention of solvent abuse because the problem of solvent abuse will not disappear by itself.

SOLVENTS

Solvents are substances that can be used to dissolve other substances. They may be in pure form or just a small ingredient in a product. There are literally hundreds of household and commercial products that can be used for recreational purposes. These products are readily available, licit (legal) and easily attainable.

When inhaled, solvents contain psychoactive materials that produce mind-altering effects. The effects of each compound vary depending on the type or amount contained within the product.

SOLVENT ABUSE

Solvent abuse in one form or another has been around for thousands of years. However, it has only been recognized as a growing epidemic for children in the last 20 years. Children can begin experimenting as early as age five. It is usually a learned behavior that they have adopted from older siblings or peers. Many abusers tend to have emotional and behavioral problems, often coming from low economic, dysfunctional families without proper parental guidance.

WHY SOLVENT ABUSE?

Solvents are most appealing to children and teens because they are often more accessible than other drugs. Solvents are cheap, easily concealable, and can be easily obtained from around the house or local hardware and convenience store. At first, youths may begin using solvents to experiment. They will then decide whether to continue using to try to escape problems that may be occurring at home or

at school. Another factor that encourages solvent abuse is peer pressure. This pressure is sometimes real or imagined, yet, often governs children's behavior and attitudes.

TYPES OF ABUSERS

- Experimental - Experimental usage develops from curiosity of the effects
- Habitual - Happens when solvents are used periodically. Eventually, a tolerance may develop and more solvents may be required to achieve the same high.
- Chronic - When abuse becomes so frequent that the user lives only to obtain the next high.

SHORT TERM EFFECTS

Effects will occur soon after inhalation, usually taking 5 to 8 seconds to reach the brain from the lungs. The effects last from an hour to an hour and fifteen minutes often followed by lethargy and tiredness. Solvents are considered a central nervous system depressant much like alcohol. However, the effects do not last as long, and the hangover is not as severe.

Feelings of euphoria (well-being), giddiness, accelerated, irregular heart beat, slurred speech, loss of inhibitions, loss of consciousness and convulsions are often immediate solvent affects.

LONG TERM EFFECTS

Long term effects depend on the amount inhaled, duration, and products inhaled. They can produce:

- Blood abnormalities
- Higher susceptibility to colds and flu's
- Blurred vision
- Chromosome damage
- Muscle damage
- Damage to lungs, kidneys, heart
- Loss of contact with reality, suicidal tendencies
- Short and long term memory damage

TOLERANCE AND DEPENDENCE

A tolerance to the products develops after habitual usage. The body becomes tolerant and will need more of the product to receive the same effect they did before.

When the individual receives withdrawal symptoms (chills, headaches, tremors) a dependence to the product has been developed, and the abuser will feel the need to continue using solvents to avoid this.

DANGERS

- Will have feelings of omnipotence (feel all powerful, indestructible)
- Likely to participate in hazardous behavior (engage in criminal activities or violence)
- Some products are highly flammable (accidental fires occur)

HOW TO DETECT

When high solvent abusers exhibit severe behavioral and physical changes similar to an alcohol induced individual except they may show more muscle incoordination. Physiological changes include: giddiness, slurred speech, reddened eyes, dilated pupils and strange behavior. Signs to look for when an abuser is not high are:

- Paraphernalia i.e. ziploc bags, aerosol cans, solvent containers
- Sores around mouth and nose
- Laziness, unmotivated
- Poor grades and attendance
- Irritability, moodiness
- Different choice of friends

HOW CAN DIFFERENT PEOPLE HELP?

Parents

- Can keep solvent products stored places out of reach of children
- Encourage manufacturers to put ingredients and hazardous signs on volatile products
- Provide and open and honest environment
- Instill pride in the lives of the youth
- Provide awareness of culture and heritage
- Know how to detect solvent abusers and its effects
- Get rid of old. unused solvent products in the household
- Use pump sprays rather than aerosol containers

Teachers

- Be informed of the dangers of solvent abuse and its potential hazards
- Ensure solvent abuse prevention workshops are available for children
- Know how to detect solvent abuse
- Encourage healthy extra-curricular activities
- Make cultural and spiritual identity more accessible through the classrooms and the school curriculum

Merchants and Manufacturers

- Observe suspicious purchases
- Add foul smelling products to inhalants to discourage use
- Take part in funding and be supportive of projects
- Package products in large containers. not so easily concealable
- Place appropriate labels and warning signs on products

Yourself

- Just say no
- Make good choices
- Feel good about yourself and your culture
- Be a good friend to others and be there to listen
- Remember how hazardous solvents are

If anyone would like more information contact:

Marcia Cummings
Solvent Abuse Prevention Program Coordinator
@
Nechako Fraser Junction Metis Association
409 - 3rd Avenue
Prince George. B.C.
Telephone: (604) 564-1167
Fax: (604) 564-1541
or
E-Mail <solvent *a* mail.pgweb.com>

Appendix E: Solvent Abuse Prevention Workshop

SOLVENT ABUSE PREVENTION WORKSHOP FOR SERVICE PROVIDERS
≈ OUTLINE ≈

1. Introduction (Worksheet)
2. Commonly Used Solvents
3. Reasons For Abuse
4. Short Term Effects
5. Long Term Effects
6. Video Part 1 & 2
7. Dangers
8. Tolerance & Dependence
9. Detecting Solvent Abuse
10. Treatment
12. Prevention Exercise
13. Evaluation
14. Handout Resource Materials

Choose the best answer!

1. Where is solvent abuse?

   a. only in isolated areas
   b. Canada and the United States
   c. worldwide
   d. Both a and b

2. Who is most likely to abuse solvents?

   a. males 7-11
   b. females 12-17
   c. males 12-17
   d. females 7-11

3. Are solvents fatal?

   a. only if you sniff large amounts often
   b. no
   c. only if you mix solvents with other drugs
   d. yes

4. Women who abuse solvents when pregnant

   a. can not harm the fetus, it is protected
   b. have an easier time during delivery
   c. will have a child with FSS
   d. will have a child with a low birth weight, otherwise healthy

5. Try to name ten solvents

_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

Choose the best answer!

1. Where is solvent abuse?

   a. in isolated areas where a lack of opportunities exist
   b. Canada and the United States
   c. worldwide
   d. Both a and b

"Solvent abuse is world wide and many studies have been done in Australia, New Zealand, England, Scotland, USA and Canada. It is known that some groups and communities have large scale problems of solvent abuse."(McTimoney & Associates Inc.)

2. Who is most likely to abuse solvents?

   a. males 7-11
   b. females 12-17
   c. males 12-17
   d. females 7-11

"In general terms, solvent abuse often starts with children, as young as eight years old and is found mainly in the 12-17 age group. Some studies say ten times more males than females abuse solvents, others say it is only three times."(McTimoney & Associates Inc.)

3. Are solvents fatal?

   a. only if you sniff large amounts often
   b. no
   c. if you mix solvents
   d. yes

Sniffers may die the first time they sniff solvents or the fiftieth from Sudden Sniffing Death (SSD)

4. Women who abuse solvents when pregnant

   a. can not harm the fetus, it is protected in the womb
   b. have an easier time during delivery
   c. will have a child with FSS
   d. will have a child with a low birth weight

"Fetal Solvent Syndrome (FSS) refers to a series of birth defects that happen to babies born to mothers who used solvents while pregnant. These birth defects are similar to birth defects that occur in babies of mothers who drank alcohol during pregnancy, Fetal Alcohol Syndrome(FAS)."
(McTimoney & Associates Inc.)
- Small birth size, small birth weight, deformities of the head and face, brain damage and mental retardation.

5. Try to name ten solvents

Glue	Petrol
Paint thinner	Butane gas
Hair spray	Correcting fluids (white out)
Lighter fluid	Whipping cream
Dry cleaning fluids	Oven cleaner

McTimoney & Associates Inc. (1990). Your Community! Our Future! Community Action Against Solvent Abuse. National Native Alcohol and Drug Abuse Program Health and Welfare Canada. New Brunswick.

COMMONLY USED PRODUCTS

- aerosol hair spray
- cigarettes or charcoal fluid
- disinfectants
- fingernail polish
- freon
- gasoline
- hobby glues and cements
- lacquers and enamels
- permanent felt marker ink
- spray deodorants
- spray paint
- upholstery protection
- varnishes and varnish removers
- vegetable frying pan lubricants
- windshield de-icers
- whipped cream propellants
- white out

REASONS FOR ABUSE

Why abuse solvents?	Why abuse any drug?
legal cheap available accessible hangover is not as severe as alcohol fast easily concealable only drugs they can access	low-self-esteem peer pressure learn by watching others to escape reality curious experimenting excitement boredom lacking cultural identity unaware of the effects family problems improper moral upbringing sibling influence need for instant gratification feelings of hopelessness/helplessness

SHORT TERM EFFECTS

(5-8 seconds for the solvents to go from the lungs to the brain)
- very fast absorption time
- bypasses digestive process, short latency period
- psychoactive effect even faster than a drug administered through intravenous injection

- ☐ euphoria
- ☐ bizarre behavior/lose inhibitions
- ☐ coma/convulsions
- ☐ delusions
- ☐ dizziness
- ☐ hallucinations (visual and auditory)
- ☐ impulsive behavior
- ☐ light headedness
- ☐ muscle incoordination
- ☐ omnipotence (all powerful)
- ☐ slurred speech
- ☐ short term memory loss
- ☐ vomit
- ☐ sudden sniffing death (cardiac arrhythmia)

-Last for an hour to an hour and fifteen minutes.....

➔ followed by headaches, drowsiness and lethargy

LONG TERM EFFECTS

- ☐ irreversible effects
- ☐ balance disturbance
- ☐ blood abnormalities
- ☐ brain damage (cerebral atrophy & loss of brain cells)
- ☐ liver and kidney failure (damages cells)
- ☐ muscle damage and loss of muscle mass
- ☐ fatigue
- ☐ fine movement degeneration
- ☐ lowers immune system
- ☐ promotes cancer growth
- ☐ ulceration's around mouth and nose
- ☐ suicidal tendencies

DANGERS

- asphyxiation (when respiratory controls are inhibited in the medulla, lack of oxygen in the blood as well as a lack of oxygen being transported to the brain)
  -results in brain damage or death

- cardiac arrhythmia (50% of deaths caused by this)

- effect on community

  - accidents ↑
  - vandalism ↑
  - suicide ↑
  - death ↑

- many products are highly flammable

- interference with development

- suffocation (many abusers pass out with bags over the mouth)

- fetal solvent syndrome (FSS), studies show:

  - low birth weight
  - preterm delivery
  - microcephaly (abnormally small head circumference)
  - narrow bifrontal diameter
  - deep set eyes
  - small midface
  - low-set prominent ears
  - spatulate (blunted) fingertip

TOLERANCE AND DEPENDANCE

Tolerance:

After frequent or chronic use the body adjusts to the drugs continual presence, therefore larger amounts of the product must be taken to achieve the desired high.

Physical Dependence:

After a tolerance has developed for some time, the body requires the product for normal functioning.

Psychological Dependence:

This is a condition in which a person has a strong emotional need to continue taking the product.

Withdrawal:

Negative physiological and psychological reactions experienced when a person suddenly stops taking and addictive drugs. If someone who is physically dependent discontinues drug use they may experience the following symptoms:

headaches

dizziness

chills

hallucinations

vomiting and stomach cramps

tremors (shakes)

DETECTING SOLVENT ABUSE

light sensitivity
irritated, reddened eyes
double vision
ringing in ears
sneezing
coughing
bad breath & body odor
nausea and vomiting
abnormal heart beat
slurred speech
unsteady muscle coordination
drunken appearance
aggressive behavior
abnormal, bizarre behavior
chest pains

headaches
loss of appetite
rash around mouth and nose
muscle and joint aches
loss of appetite
unmotivated
rash around mouth and nose
laziness
grades in school go down
change in friends

Paraphernalia:

stains
rags
empty aerosol cans
plastic and paper bags

If you find someone:

- semi-conscious or in a coma
- shaking, trembling, or having convulsions
- has severe chest pains

Proceed with the following:

➔ open doors and windows to let fresh air in and allow ventilation
➔ cover person with blanket or coat to keep them warm without inhibiting breathing
➔ retain solvent products for medical staff
➔ put the individuals head to the side to prevent them from swallowing their vomit
➔ get help immediately

Long term abuse:

Ideas?....

- **Counseling**
- **Be aware of behavior**
- **Treatment center...**

Brainstorming! Break up into groups and list some ways you can prevent someone from sniffing.

As a teacher/educator you can:

(see Resource Kit for ideas)

List some ways you can prevent someone from sniffing.

As a parent you can:

(See Resource Kit for ideas)

List some ways you can prevent someone from sniffing.

As a merchant/manufacturer you can:

(See Resource Kit for ideas)

What's Out There?

CHOOSE THE BEST ANSWER. PLACE IN SPACE PROVIDED

1. ____	Apehtaw Kosisan Metis Child and Family Support Society	a.	Financial assistance, services to the mentally handicapped, investigates child abuse/neglect.
2. ____	Carrier Sekani Family Services	b.	Provides workshops, resource materials and workshop manuals to anyone. Gives referrals.
3. ____	Solvent Abuse Prevention Program Nechako Fraser Junction Metis Association	c.	Facilitates parenting programs, child health clinic, diabetes information. Native healing an important component.
4. ____	Youth Drug and Alcohol Native Friendship Centre	d.	Counseling for youth and their families. Has a program that deals with young offenders.
5. ____	Intersect Youth and Family Services	e.	Has family care workers. Visits homes and provides information and counseling for children and families.
6. ____	Elizabeth Fry Society	f.	Court assistance to offenders and victims. Information on custody, access, and provides referrals. Youth account-ability Panel and Employment and Education Skills.
7. ____	Ministry of Social Services	g.	Assessment, education and treatment towards breaking any drug dependency. Referral services available. No charge.
8. ____	Central Interior Native Health	h.	Support, referrals for Metis families. Family care worker available. Awasisuk Metis Specific Head Start Program.
9. ____	PG Alcohol and Drug Services Society	I.	Native counselors for drug and alcohol counseling. Help them re-enter a drug-free life. Targets Aboriginal clientele.